

List of Contents

NUMBER 1/2

- | | |
|--|---|
| M. Z. Raqab | 1 Some Results on the Moments of Record Values from Linear Exponential Distribution |
| Y. J. Cho, H. Zhou,
S. M. Kang and S. S. Kim | 9 Approximations for Fixed Points of ϕ -Hemicontractive Mappings by the Ishikawa Iterative Process with Mixed Errors |
| L. Tadj and A. Hamdi | 19 Maximum Entropy Solution to a Quorum Queueing System |
| M. J. Castro and
P. Garcia-Navarro | 29 The Application of a Conservative Grid Adaptation Technique to 1D Shallow Water Equations |
| G. Zet and V. Manta | 37 Self-Dual Model of $SU(2)$ Gauge Theory in a Space-Time with Axial Symmetry |
| M. Razzaghi
and S. Yousefi | 45 Legendre Wavelets Method for the Solution of Nonlinear Problems in the Calculus of Variations |
| A. K. Pani and
G. P. Bhattacharjee | 55 Temporal Representation and Reasoning in Artificial Intelligence: A Review |
| L. Egghe and
I. K. Ravichandra Rao | 81 Theory of First-Citation Distributions and Applications |
| M. Fahl | 91 Computation of POD Basis Functions for Fluid Flows with Lanczos Methods |
| Y.-K. Chen and
S.-Y. Chou | 109 Computing Accumulation Density of Particles on a Line with Parabolic Trajectories |
| B. González, J. Matera
and H. M. Srivastava | 133 Some q -Generating Functions and Associated Generalized Hypergeometric Polynomials |
| P. Tritscher, W. W. Read,
P. Broadbridge
and J. H. Knight | 177 Steady Saturated-Unsaturated Flow in Irregular Porous Domains |
| H. Bellout and F. Bloom | 195 Modeling the Buckling of Rectilinearly Orthotropic Truncated Conical Shells |
| Y. Shepetukha and
D. L. Olson | 229 Comparative Analysis of Multiattribute Techniques Based on Cardinal and Ordinal Inputs |

NUMBER 3/4

- | | |
|--|---|
| Y. Lee | 243 Discrete-Time Geo ^X /G/1 Queue With Preemptive Resume Priority |
| K. K. Nambiar and
S. Sreevalsan | 251 Compound Matrices and Three Celebrated Theorems |

P. Řehák	257	Generalized Discrete Riccati Equation and Oscillation of Half-Linear Difference Equations
S. De Marchi	271	Polynomials Arising in Factoring Generalized Vandermonde Determinants: An Algorithm for Computing Their Coefficients
L. Jódar and M. C. Casabán	283	Convergent Discrete Numerical Solutions of Coupled Mixed Partial Differential Systems
F. Harary and P. D. Johnson, Jr.	299	The Shields-Harary Indices of Vulnerability of a Graph
H. B. Thompson and C. Tisdell	311	Three-Point Boundary Value Problems For Second-Order, Ordinary, Differential Equations
Z. Liu and S. M. Kang	319	Stability of Ishikawa Iteration Methods with Errors for Strong Pseudocontractions and Nonlinear Equations Involving Accretive Operators in Arbitrary Real Banach Spaces
R. P. Agarwal and D. O'Regan	331	A Note on Equilibria for Abstract Economies
E. Massad, F. A. B. Coutinho, M. N. Burattini, L. F. Lopez and C. J. Struchiner	345	Modeling the Impact of Imperfect HIV Vaccines on the Incidence of the Infection
X. Liu and R. Dickson	353	Stability Analysis of Hopfield Neural Networks with Uncertainty
K. L. Kuttler, A. Park, M. Shillor and W. Zhang	365	Unilateral Dynamic Contact of Two Beams
J. S. Arnold	385	A Simplified Model of Wound Healing III—The Critical Size Defect in Three Dimensions
W. Zhang and S. Deng	393	Projected Gronwall-Bellman's Inequality for Integrable Functions
H. M. Byrne and S. A. Gourley	403	Global Convergence in a Reaction-Diffusion Equation with Piecewise Constant Argument
Y. Zhong and Y. Shi	411	An Interior-Point Approach for Solving MC^2 Linear Programming Problems
W. Gille	423	Chord Length Distribution Density of an Infinitely Long Circular Hollow Cylinder
F. Stagnitti, L. Li, A. Barry, G. Allinson, J.-Y. Parlange, T. Steenhuis and E. Lakshmanan	433	Modelling Solute Transport in Structured soils: Performance Evaluation of the ADR and TRM Models
S. S. Dragomir and R. P. Agarwal	441	Some Inequalities and Their Application for Estimating the Moments of Guessing Mappings

NUMBER 5/6

- | | |
|---|--|
| F. E. Levis | 469 The Error in Discrete Φ -Approximation |
| Y. Yavin and C. Frangos | 479 Modelling of the Planar Motion of a Rolling Four Links Robot |
| G. Łukaszewicz | 487 Long Time Behavior of 2D Micropolar Fluid Flows |
| H. Kano, B. K. Ghosh and H. Kanai | 511 Single Camera Based Motion and Shape Estimation using Extended Kalman Filtering |
| A. O. Celebi and V. K. Kalantarov | 527 Spatial Behavior Estimates for the Wave Equation under Nonlinear Boundary Conditions |
| J. Banaś and M. Lecko | 533 An Existence Theorem for a Class of Infinite Systems of Integral Equations |
| D. Thi Thanh Binh, A. Pham Ngoc Dinh and N. Thanh Long | 541 Linear Recursive Schemes Associated with the Nonlinear Wave Equation Involving Bessel's Operator |
| N. C. Ghosh, S. Nath and L. Debnath | 557 Propagation of Waves in Micropolar Solid-Solid Semispaces in the Presence of a Compressional Wave Source in the Upper Solid Substratum |
| N. Brauner and G. Finke | 565 Cycles and Permutations in Robotic Cells |
| S. Cong and L. Hong | 593 Interval Models for Target Tracking Algorithms |
| Y. Yoshida | 603 A Zero-Sum Stopping Game in a Continuous-Time Dynamic Fuzzy System |
| Y. Yoshida | 615 Multicriteria Optimal Stopping of a Fuzzy and Stochastic System |
| S. S. Cheng and F.-Y. Hsieh | 623 Existence and Localization Theorems for a Discrete Nonlinear Eigenvalue Problem |
| S. K. Ntouyas and P. K. Palamides | 641 The Existence of Positive Solutions of Nonlinear Singular Second-Order Boundary Value Problems |
| R. J. Bernhard, F. A. Milner and G. Rabbiolo | 657 Vibrations of a Beam and Related Statistical Properties |
| J. Seydel and D. L. Olson | 677 Multicriteria Support for Construction Bidding |

NUMBER 7/8

- | | |
|--|--|
| R. E. Mickens | 703 A Particular Exact Solution to the Central Core Model of the Renal Medulla |
| E. Ponsoda, E. Navarro, R. Company and D. Roselló | 711 A Quantitative Measure of Well-Conditioning for Linear Two-Point Boundary Value Problems |

U. Foryś	725 Hopf Bifurcation in Marchuk's Model of Immune Reactions
J. R. King	737 Two Generalisations of the Thin Film Equation
K. K. Nambiar	757 Shannon's Communication Channels and Word Spaces
M. Aassila	761 Nonexistence of Global Solutions of a Hyperbolic Problem
D. M. Thomas and B. Urena	771 A Model Describing the Evolution of West Nile-Like Encephalitis in New York City
A. Nagurney, J. Dong and P. L. Mokhtarian	783 Teleshopping versus Shopping: A Multicriteria Network Equilibrium Framework
Z. Ding, H. Leung, K. Chan and Z. Zhu	799 Model-Set Adaptation Using a Fuzzy Kalman Filter
D. W. Pearson	813 Shadowing and Prediction of Dynamical Systems
W.-C. Lian, C.-C. Chou, C.-T. Liu and F.-H. Wong	821 Existence of Solutions for Nonlinear BVPs of Second-Order Differential Equations on Measure Chains
S. G. Hristova and L. F. Roberts	839 Razumikhin Technique for Boundedness of the Solutions of Impulsive Integrodifferential Equations
L. Han, Z. Ma and H. W. Hethcote	849 Four Predator Prey Models with Infectious Diseases
L. Jódar and M. D. Roselló	859 Polynomial Approximation Solutions with <i>A Priori</i> Error Bounds of First-Order Quasi-Linear Initial-Value Partial Differential Problems
J.-B. Bacot and J. H. Dshalalow	873 A Bulk Input Queueing System with Batch Gated Service and Multiple Vacation Policy
P. R. Parthasarathy, N. Selvaraju and R. B. Lenin	887 The Numerical Solution of a Birth-Death Process Arising in Multimedia Synchronization
T. Z. Boulmezaoud and T. Amari	903 A Finite-Element Method for Computing Nonlinear Force-Free Fields
T. Pham-Gia and T. L. Hung	921 The Mean and Median Absolute Deviations
A. Bolotin	937 Quantum Mechanical Approach to Fuzzy Logic Modelling
S. Park	947 Fixed Points and Quasi-Equilibrium Problems

NUMBER 10/11

STABLE NON-GAUSSIAN MODELS IN FINANCE AND ECONOMETRICS

S. Mittnik and S. Rachev

xiii Preface

PROBABILISTIC MODELS IN FINANCE

- | | | |
|---|------|--|
| C. Marinelli, S. T. Rachev
and R. Roll | 955 | Subordinated Exchange Rate Models: Evidence for Heavy Tailed Distributions and Long-Range Dependence |
| T. J. Kozubowski
and K. Podgórski | 1003 | Asymmetric Laplace Laws and Modeling Financial Data |
| T. J. Kozubowski | 1023 | Fractional Moment Estimation of Linnik and Mittag-Leffler Parameters |
| S. Ortobelli L. and
S. T. Rachev | 1037 | Safety-First Analysis and Stable Paretian Approach to Portfolio Choice Theory |

STATISTICAL AND ECONOMETRIC METHODS

- | | | |
|--|------|--|
| A. SenGupta and S. Roy | 1073 | Classification Rules for Stable Distributions |
| M. S. Paoletta | 1095 | Testing the Stable Paretian Assumption |
| J. P. Nolan, A. K. Panorska
and J. H. McCulloch | 1113 | Estimation of Stable Spectral Measures |
| W. Krämer and R. Runde | 1123 | Diagnostic Checking in Linear Processes with Infinite Variance |
| A. Thavaneswaran
and S. Peiris | 1133 | Recursive Estimation for Regression with Infinite Variance Fractional ARIMA Noise |
| A. Thavaneswaran
and C. C. Heyde | 1139 | A Note on Filtering for Long Memory Processes |
| S. Mittnik, V. Paulauskas
and S. T. Rachev | 1145 | Statistical Inference in Regression with Heavy-Tailed Integrated Variables |
| R. Gatto | 1159 | Bootstrap Confidence Intervals for the Simultaneous Equations Model under Heavy-Tailed Contamination |
| S. Mittnik, S. T. Rachev
and G. Samorodnitsky | 1171 | The Distribution of Test Statistics for Outlier Detection in Heavy-Tailed Samples |

APPLICATIONS TO FINANCE

- | | | |
|---|------|--|
| A. Vollert | 1185 | Margrabe's Option to Exchange in a Paretian-Stable Subordinated Market |
| H. A. Hauksson
and S. T. Rachev | 1199 | The GARCH-Stable Option Pricing Model |
| J. Leškow | 1213 | The Impact of Stationarity Assessment on Studies of Volatility and Value-at-Risk |
| I. Khindanova, S. Rachev
and E. Schwartz | 1223 | Stable Modeling of Value at Risk |

NUMBER 12/13

TOPICS IN THE MATHEMATICAL MODELLING OF SMART MATERIALS

PHASE TRANSITIONS

M. Fabrizio, A. Morro and M. Pitteri	xiii	Preface
O. Bruno and D. Vaynblat	1261	Two-Wave Structures in Shock-Induced Martensitic Phase Transitions
M. C. Calderer	1273	Studies of Layering and Chirality of Smectic A* Liquid Crystals
Y. Efendiev and M. Luskin	1289	Stability of Microstructures for Some Martensitic Transformations
I. Müller and S. Seelecke	1307	Thermodynamic Aspects of Shape Memory Alloys

CONTINUA WITH STRUCTURE

G. Capriz and A. degli Azzoni	1357	A Toupin Liquid as an Essential Ingredient for a Smart Damper
J. M. Golden and G. A. C. Graham	1363	The Problem of a Viscoelastic Cylinder Rolling on a Rigid Half-Space
A. Hanyga	1399	Wave Propagation in Media with Singular Memory
P. Villaggio	1423	The Problem of the Stiffener and Advice for the Worm

ELECTROMAGNETIC MATERIALS

M. Fabrizio and A. Morro	1431	Models of Electromagnetic Materials
G. Gentili	1459	A History-Differential Model for Ferromagnetic Hysteresis
M. W. McCall	1483	Axial Electromagnetic Wave Propagation in Inhomogeneous Dielectrics
J. A. Sherwin and A. Lakhtakia	1499	Nominal Model for Structure-Property Relations of Chiral Dielectric Sculptured Thin Films

